

# Gender Difference in Students' Academic Performance in Colleges of Education in Borno State, Nigeria: Implications for Counselling

Umar Goni, Yagana wali S. B., Hajja Kaltum Ali & Mohammed Waziru Bularafa

Department of Education, University of Maiduguri, Borno State, Nigeria.

## Abstract

This study examines the differences between students' gender and academic achievement in Colleges of Education in Borno State. The study set one research objective, one research question and tested one research hypothesis. The population of this study include all the NCE students from three NCE awarding institutions in the state that were purposively selected for the study, the Krejcie and Morgan method of selecting sample was employed to choose (322) participants and proportionate techniques was also used to draw 186 students out of 351 NCE III students in Kashim Ibrahim College of Education, Maiduguri and 136 students out of 210 NCE III students in Umar Ibn Ibrahim College of Education, Science and Technology, Bama. Students' Academic Performance Aptitude Test (SAPAT)  $r=0.62$  was used by the researchers. T-test was used to test the hypothesis raised in this study. The results indicated that there was no significant differences exist between gender and Academic performance in Colleges of Education in Borno State, in favour of female students therefore, the null hypothesis was accepted. The recommendation advanced was that: the male students lack pocket money thus, and state government should increase their annual scholarship so as to support their academic activities.

## Introduction

Education is the process of developing the capacities and potentials of the individual so as to prepare that individual to be successful in a specific society or culture. From this perspective, education is serving primarily as an individual development function. Education begins at birth and continues throughout life, it is constant and on-going. Schooling generally begins somewhere between the ages of four and six when children are gathered together for the purposes of specific guidance related to skills and competences that society deems important. In the past, once the formal primary and secondary schooling was completed the process was finished. However, in today's information age, adults are quite often learning in informal setting throughout their working lives and even into retirement. Education, in its broadest sense, may be defined as a process designed to inculcate the knowledge, skills and attitudes necessary to enable individuals to cope effectively with their environment. Its primary purpose is to foster and promote fullest individual self-realization for all people. Achieving these goals require understanding of commitment to the proposition that education is a primary instrument for social and economic advancement of human welfare (Verma, 1990).

The world is becoming more and more competitive. Quality of performance has become the key factor for personal progress. Parents desire that their children climb the ladder of performance to as high a level as possible. This desire for high level of achievement puts a lot of pressure on students, teachers, parents and

schools and in general the education system itself. In fact, it appears as if the whole system of education revolves round the academic performance of students, though various other outcomes are also expected from the system. Thus a lot of time and effort of the schools are used for helping students to achieve better in their scholastic endeavours. The importance of scholastic and academic performance has raised important questions for educational researchers (Nuthanap, 2007).

Performance at school and experience in the larger world are related to the self-image of students. They have to strive hard to achieve better results academically. As a result, school and studies become major stressors. Hence, adolescents tend to give up and neglect recreational activities. This has resulted in the absence of physical and mental relaxation. The best type of relaxation is one in which the students learn the skills of relaxing. Schools should provide opportunities for regular physical and mental training like “yoga” which is relaxation technique which facilitates the enhancement of pattern of study, self-concept and creativity on academic achievement (Erickson 1987). Teachers in schools should become facilitators of learning. The infinite treasure within every learner should be discovered and nurtured. For the purpose of improving learning,

Teaching and learning in educational institutions from the nursery school to the University are assessed. Whatever is the system of education, the learning outcome is determined by assessing performance. The essence of certification in our daily life is not only of its usage to enter labour market but also for vertical and horizontal mobility. However, the most important fact tied to examination process is the need for study techniques which act as a tool for examination success. Assessment of the learning outcome is done for determining what has been learned and for decision-making with respect to selection of candidates for higher studies or job placement. It is a great joy to achieve what one aims at. If we define achievement as having good results in anything, we put in more efforts so that we can be happy and receive commendation, then it became necessary to learn how to succeed, putting in place various ways from those who have used similar ways successfully. From a psychological point of view, Morrison and Macintyre (1993) defined academic success in terms of acquisition of different kinds of knowledge and cognitive skills. They went further to say that in some respects the multidimensional description would be theoretically most satisfactory. This approach is not all well applicable because evidence usually available is only on attainments on one or two aspects of school work or ‘average’ attainments with particular skills assessed not generally specified.

Pillow, (2008) has examined the gender differences among student on their academic performance has reveal that in individuals background characteristic affect his/her cognitive and non-cognitive is one of the most significant and influential characteristics in academic performance. Nori, (2002) studies the sex differences and the relationship between creativity and self-concept on academic performance among high school students. There were 306 high school students (150 boys and 156 girls) to measure the rate of creativity questionnaire and cumulative grade point average Cumulative Grade Point Average (CGPA) the result were analyzed by cumulative grade point average Cumulative Grade Point Average (CGPA) for academic performance the analysis revealed that there was no significant relationship between creativity and self-concept on academic performance. In his study, the students were randomly selected from 68 schools (2,264 students, 38% where boys and 62% were girls). The academic performance of students was assessed using a self-reported achievement in some subject area English, Natural science, Mathematics, and Social science. A canonical

correlation analysis found that when operationalized by their grade creativity and self-concept was related to academic achievement for both girls and boys. For girls, elaboration related to two of the academic subject (social science and English language) and fluency related to natural science and mathematics. For boys, flexibility was the pre-dominant factor that related to all four (4) academic subject areas. When Operationalized thinking the Torrance creativity test (TTCT) Abedi-Schumacher creativity test (ACT) and villa and Auzmendi creativity test (VAT) on the other hand, creativity and self-concept was scarcely related to academic achievement. Yet, several other researchers also have attended to the idea that creativity is related to academic performance.

However, a study on Spanish student indicates that some differences exist between males and females on aspect of creativity related to academic achievement, although creativity is shown to be related to academic performance for gender Xixia, (1999) also found that the degree of creativity between male and female is similar but they also concluded that the most famous creative person are usually male. Some researcher reported that one gender is more creative than another gender.

Gender issue has become the talk of today's forum. Although the literacy rate is more among the boys than girls, it is quite interesting to observe that girls are securing better ranks than boys in almost all competitive examinations. From the last ten years, it is very fascinating to note that the girls figure is more often in top ten, ranks in tenth's class annual examination. Gender as a predictor of mathematics achievement in Bahurudin and Luster (1998) found the gap between the average scale scores of males and females was quite small at all three grades and has fluctuated only slightly over the past 10 years. There was no significant difference by gender at the fourth-grade level. In Louisiana, neither the scale scores nor the percentage of students scoring at or above the proficient level was significant for gender at fourth grade. At eight grade, the difference in scale scores was not significant, but the difference in percentages scoring above the proficient level was positively significant for male. In an analysis of Zhang and Manon (2000) found that males had a larger variance in mathematics scores than females, in this study, females tended to outperform males among the low-achieving students.

The problem of poor academic performance is evidenced by the large number of students who come for reseating and carry over courses to the next level of the study. For instance, a study carried out by Pindar (1999) indicated that a total of 181 students out of the 338 final year Nigerian Certificate in Education (NCE) students of Kashim Ibrahim College of Education Maiduguri could not graduate that session because they failed at least one course each. During the 2013/14 academic session, out of the 947 final year Nigerian Certificate in Education (NCE) students, 519 could not graduate because of the same problem.

The researcher observed over the years that a large number of NCE students proceed to next level with weak grades, carry over courses and some were even withdrawn from the College because of poor performance. In the end, the NCE graduates will be employed to teach at the primary and junior secondary school levels of education. In addition, if the NCE students are performing badly there is the possibility that those taught by these students will perform badly academically. The quality of education provided in any society and the nature of change effected by education are both dependent on the quality of teachers and by the effectiveness of their teaching.

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### **Objectives of the Study**

The study is to examine whether there is:

1. Any gender difference in students' Academic Performance in Colleges of Education in Borno State

### **Research Question**

One research question is set in this study:

1. Is there any gender difference in students' Academic Performance in Colleges of Education in Borno State?

### **Research Hypothesis**

One null hypothesis is tested in this study:

$H_0$ : There is no significant gender difference in students' Academic Performance in Colleges of Education in Borno State

### **Methodology**

The research design for this study is survey. Survey according to Ary, Jacob, and Razaviah (1979) sought to obtain information from people concerning current status of phenomena or events over a period of one year. Furthermore, survey according to Kerlinger and Lee (2000) are generalized means of data collection through interviews or questionnaire. The targeted population for this study was 4,517 students who have registered in Colleges of Education in Borno State. According to the Ministry of Higher Education, Borno State (2014), there were 4,517 students registered to pursue Nigeria Certificate of Education in Borno State Colleges of Education during 2013/14 academic session. The institutions are; Umar Ibn Ibrahim College of Education Science and Technology Bama, College of Education, Waka Biu and Kashim Ibrahim College of Education, Maiduguri.

**Table 1: Total Number of Registered Students in Three NCE Awarding Institutions in Borno State by Level and Gender**

S/N	College of Education	N.C.E I		N.C.E II		N.C.EIII		N
		M	F	M	F	M	F	
1.	Kashim Ibrahim College of Education, Maiduguri	511	338	453	313	200	151	1,966
2.	Umar Ibn Ibrahim College of Education, Science and Technology, Bama	402	204	336	179	136	74	1,331
3.	College of Education, Waka Biu		201	311	313	303	41	51
<b>Total</b>								<b>4517</b>

**NB: MF = Male/Female      M= Male      F= Female**

**Sources:** Exams and record offices of three Colleges of Education, Borno State, Nigeria

Table 1 shows the three NCE awarding institutions in Borno State by level and gender

A sample of 322 NCE III students was chosen from two Colleges of Education, Umar Ibn Ibrahim College of Education, Science and Technology, Bama and Kashim Ibrahim College of Education Maiduguri, Borno State. Two NCE awarding institutions were selected because of the insecurity in the area, NCE III was chosen in this study because they have stayed longer in their respective Colleges and might have gone through all the NCE I and II Education courses. The choice of a sample size for a study depends on the degree of accuracy the researcher wishes to have over their generalizations. The larger the samples size the more the generalization that can be made about the population from which the sample is drawn. (Cohen & Holliday 1996).

Coolican (2004) opines that for qualitative data, a precise sample number can be calculated according to the level of accuracy and the level that the researcher requires in his/her work. Devaw (1996) explain that for a 5% sample error, the sample size required is 400 while Krejcie and Morgan (1970) and (2006) suggest that for a population of 1,000, 000 a sample size of 384 is adequate for a 95% confidence level. Thus 322 NCE students were sampled from a population of 4,517 constituting 70%. Table 3.2 shows two sampled Colleges of Education during 2013/14 Academic Session and Sample Size.

**Table 2: Sampled NCE III Students from the Two Colleges of Education, by Gender**

S/N	College of Education	Sample of M/F		
		M	F	N
1	Kashim Ibrahim College of Education, Maiduguri	101	85	186
2	Umar Ibn Ibrahim College of Education, Science and Technology, Bama	97	39	136
<b>Total</b>				<b>322</b>

**NB:**

**M= Male**

**F= Female**

Table 2 shows the two sampled Colleges of Education in Borno State.

The following stages were followed to draw the sample for this study. Stage one, purposive sampling technique was used to select two Colleges of Education in Borno State, because of the insecurity in the area, purposive sampling technique was considered appropriate for this study because Bamidele, Seweje and Alonge (2002) said that in purposive sampling, the researcher can carefully and consciously choose the elements to be included in the sample so that the sample can be developed to suit the researcher's needs. The assumption is that, with sound judgment based on expertise, an appropriate element can be selected which is typical or representative of the population. Stage two, the Krejcie and Morgan's (1970) and (2006) principles of determining sample size for research activities was used to determine the sample size. Thus 35% from the two sampled Colleges of Education were considered adequate representatives of the 4,517 of NCE I, II and III. Stage three, propionate sampling procedure was employed to select 322 participants; 186 students from 351 NCE III from Kashim Ibrahim College of Education, Maiduguri and 136 students from 210 NCE III from Umar Ibn Ibrahim College of Education, Science and Technology, Bama.

One instrument Students' Academic Performance Aptitude Test (SAPAT) was used in collecting data for this study, the instrument was developed and validated by the researcher. It measured NCE Students' Academic Performance. It contained 20 items on Academic performance. The source of the items in the instrument was from the education courses that were taught in NCE I and II in all the Colleges of Education, in the State. The instrument also require respondents to respond to aptitude test on either Right or wrong answer, t-test was used to test the hypothesis raised in this study which tested the differences between the variables and gender. The use of t as a test statistics to test the hypothesis of no difference between the means of two normally distributed populations, Lapin (1980) noted that the t-test is used when a number is small. Tuckman (1978) and Glass (1984) also noted that t-test is a statistical test that allows one to compare two means to determine the probability of the difference.

## Results

### Descriptive Data

Mean and standard deviation of the variable by gender.

**Table 3: Descriptive Statistic of Students' Academic Performance by Gender.**

Variables	N	Mean		Std.	
		M	F	Male	Female
Academic Performance	322	1.41	25.9	.493	4.43

Table 3. Presents the students' responses on gender and academic performance. This analysis was revealed from the value of scores which were shown by the mean and standard deviation of the students. The obtained responses on academic performance for male students show the mean of 1.41 and the female students 25.9 and standard deviation of .493 for male and 4.43 for female with N 322. Female students possess higher academic performance than female students.

$H_0$ : There is no significant gender difference in students' Academic Performance in Colleges of Education in Borno State.

**Table 4: Mean Scores, Standard Deviations and t-value of gender difference in students' Academic Performance in Colleges of Education in Borno State.**

Group	N	$\bar{X}$	SD	Df	t- value	p- value	Decision
Male	188	25.30	4.165	320	3.32	.6680	$S (H_0 \text{ accepted})$
Female	134	26.94	4.634				

**Source: Researcher's fieldwork, 2014.**

Table 4. Shows gender differences in students' Academic performance in Collages of Education in Borno State. The analysis revealed a mean ( $\bar{X}$ ) of 25.30 and Standard Deviation (SD) of 4.165 with degree of freedom (df) of 322 and (N) 188 for male students, a mean ( $\bar{X}$ ) of 26.94 and Standard Deviation (SD) of 4.634 with degree of freedom (df) of 322 and N 134 for female students. The observed t value of 3.32 compared with p- value of .6680, the results indicated that there was no significant differences exist between gender and Academic performance in Colleges of Education in Borno State, in favour of female students therefore, the null hypothesis was accepted.

## Discussions

In testing the hypothesis which stated there is no significant gender difference in students' and academic performance in Colleges of Education in Borno State, The analysis revealed a mean ( $\bar{X}$ ) of 25.30 and Standard Deviation (SD) of 4.165 with degree of freedom (df) of 322 and (N) 188 for male students, a mean ( $\bar{X}$ ) of 26.94 and Standard Deviation (SD) of 4.634 with degree of freedom (df) of 322 and N 134 for female students. The observed t value of 3.32 compared with p- value of .6680, the results indicated that there was no significant differences exist between gender and Academic performance in Colleges of Education in Borno State, in favour of female students therefore, the null hypothesis was accepted.

This study agrees with study conducted by Baharudin and Luster (1998) on Gender as a predictor of Mathematics achievement in their study they found the gap between the average scale scores of males and females was quite small at all three grades and has fluctuated only slightly over the past 10 years. There was no significant difference by gender at the fourth-grade level. In Louisiana, neither the scale scores nor the percentage of students scoring at or above the proficient level was significant for gender at fourth grade. At eighth grade, the difference in scale scores was not significant, but the difference in percentages scoring above the proficient level was positively significant for male. In an analysis of Zhang and Manon (2000) their findings revealed that males had a larger variance in mathematics scores than females, in this study, females tended to outperform males among the low-achieving students.

## Recommendation

The results indicated that there was no significant differences exist between gender and Academic performance in Colleges of Education in Borno State, in favour of female students therefore, the male students lack pocket money thus, and state government should increase their annual scholarship so as to support their academic activities.

## Counselling implications

There was no significant differences exist between gender and Academic performance in Colleges of Education in Borno State, in favour of female students. College counsellors should assist the male students through rational emotive counselling to make necessary adjustment.

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